

MODULE DESCRIPTOR

Module Title

Chemistry For Food Science And Nutrition

Reference	AS1015	Version	2
Created	August 2021	SCQF Level	SCQF 7
Approved	July 2021	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

Aims of Module

To provide students with a knowledge and understanding of the basic concepts of general chemistry.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Demonstrate knowledge of the basic concepts and principles of atoms and molecules, bonding, chemical reactions, and the electromagnetic spectrum.
- 2 Understand and apply the basic principles of ionic equilibria.
- 3 Demonstrate knowledge and understanding of organic chemistry related to food and nutrition.

Indicative Module Content

Atoms and molecules. Chemical bonding (hydrogen, ionic and covalent bonding), formulae and reactions. Electromagnetic spectrum. Ionic equilibria. General properties of aqueous solutions. Strong, weak and non-electrolytes. Acids, bases and buffers. Acid-base reactions. Redox and polar reactions. Appropriate conjugate acid or base of the species given. Calculate the pH of solutions and dilutions. Calculations using and converting between percent by mass, mole fraction and molarity. Oxidation and reduction. Nomenclature and properties of major functional groups in carbon-based molecules.

Module Delivery

Theoretical material will be delivered by lectures and supported by tutorials, online support material and guided reading.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	25	N/A
Non-Contact Hours	125	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Examination	Weighting:	100%	Outcomes Assessed:	1, 2, 3
Description:	A closed book examination				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

Component 1 (examination, EX1) comprises 100% of the module grade. A minimum of a Grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A: a score of 70% or above is required
B	B: a score of between 60-69% is required
C	C: a score of between 50-59% is required
D	D: a score of between 40-49% is required
E	E: a score of between 35-39% is required
F	F: a score of less than 35% is required
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None, in addition to course entry requirements.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 KOTZ, J.C., TREICHEL, P. and TOWNSEND, JR., 2015. *Chemistry & Chemical Reactivity*. 9th ed. Australia: Cengage Learning
- 2 BRUICE, P.Y., 2017. *Organic Chemistry*. 8th ed. Upper Saddle River: Pearson
- 3 BELITZ, H-D. GROSCH, W. and SCHIEBERLE, P., 2009. *Food Chemistry*. 4th rev. and extended ed. Berlin: Springer-Verlag